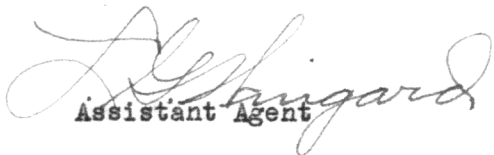


October 31, 1930

The Commissioner of Fisheries  
Washington, D. C.

I herewith present a report covering all packing and fishing operations in the Seward-Katella District, Central Alaska, embracing Resurrection Bay, Prince William Sound, the Copper and the Bering river areas, for the season of 1930, together with the activities of the Bureau of Fisheries in those waters.

Respectfully submitted,

  
Assistant Agent

IN GENERAL

This being my first season in the Central Alaska District considerable time had to be spent in familiarizing myself with office routine and records and in outlining a system of patrol and administration. The policy adopted was a continuance of office and field activities along lines followed at the Cordova office in previous years by my predecessor.

King Salmon inaugurate the salmon running season by placing their run in motion in the waters of the district early in May.

Red Salmon follow, starting their initial run in the Copper river about the middle of May. Somewhat behind the Copper river run of Reds comes the red run into the Bering river and its tributaries. Resurrection Bay and Prince William Sound furnish the next run of Reds.

Chum and Pink Salmon runs are moving in Prince William Sound coincident with the development of the red run in Resurrection Bay. These same varieties also develop their runs in Resurrection Bay while the red run in those waters is at its height.

Coho Salmon run last and are moving simultaneously in Prince William Sound, Resurrection Bay, Copper and Bering rivers. The middle of September usually sees the end of the coho runs and this closes the salmon season for the year.

The fishing and canning season opens about the 10th of May, when king runs strengthen on the Copper river. By the middle of June the red run begins showing strength and packers are busily engaged until the close of the coho season after the middle of September.

Ice conditions in the Copper river this year hampered early May fishing operations.

Gill net fishermen secured only fair individual catches during the king and red runs on the Copper river owing to the large number engaged. Less total gear was utilized during the coho runs although the individual fishermen generally fished more web, using both stake and drift nets. Owing to the heavy run of cohos the fishermen did well.

Purse seiners generally did not make good catches on Prince William Sound. Isolated boats which fished the eastern side of the Sound, in lieu of going to the western side in the vicinity from Long Bay to Port Wells where practically every seiner proceeded, did well. Fully three-fourths of the seiners engaged in fishing on the Sound concentrated their efforts primarily in the region from Long Bay to Port Wells.

## SALMON RUNS

In volume the run of King Salmon was about normal. The first fish of this species was brought in from the Copper river flats May 11th.

The runs of Reds on the Copper river were good. These runs began showing strength May 27th. Catches by fishermen continued good until the 7th of June when the run slackened. With the resumption of fishing after the closed season of June 7th and 8th the catches decreased and by the middle of the month some of the fishermen commenced returning to Cordova. Fishing remained slack through the remainder of the month but in the first days of July, just preceding the close of the season, the few boats remaining on the flats struck a run of fish and made their best catches of the season.

Prince William Sound had a good run of all varieties. The runs were a few days late, striking the traps full strength July 21st and continuing throughout the month with good showings of fish in most localities at the close of the season August 2nd.

## CATCH STRAIN

Investigation of the spawning beds of the Copper river disclosed that the intensive fishing operations placed a greater strain upon the run in that stream than should be permitted. Judging from the catches made by the fishermen and the showing of fish on the Delta of the river during the height of the run there was a substantial volume of fish in motion, but nevertheless the spawning showing was by no means commensurate with the size and force of this volume.

A complete report of the findings on two spawning investigations of the Copper river will be submitted by Mr. Seton Thompson, temporary scientific assistant, who was detailed by the Bureau to handle the inquiry.

None of the foregoing, however, applies to the spawning escapement of pinks and chums. Owing to the early closing of the season on Prince William Sound, - August 2nd -, coupled with runs being a few days late, the catch strain on these two varieties was radically relieved in the Sound waters. In fact careful estimates of the spawning areas revealed that the escapement, which was just under 2,500,000 of chums and pinks, in the waters of the Sound, exceeded that of any other year excepting the season of 1925.

Nevertheless, in the Port Wells region, where the runs of pinks and chums were earlier than in the waters of other portions of the Sound, the escapement was short. This was due to a short escapement in 1928 and a poor return this year. The large number of seiners further impaired these runs.

## GEAR

There was too much gear in the water this season, far too much, for the length and volume of the runs. Last season also saw an excessive gear increment but the salmon runs in these waters for the season of 1929 were the largest in the history of fishing operations in Prince William Sound, and due to the sheer enormity of the masses of fish moving, did not by any means suffer the whittling down by fishing operations that the smaller sized runs of this season suffered during the active season.

The operations of this season, therefore, definitely establish that the average run in the district cannot by any means with safety stand the excessive catches caused by the recent large increase in gear.

Recommendations bearing on this question are embraced in this report.

## TRAPS

Fifty-nine traps were operated in the Central Alaska region, by thirteen operating companies, during the season of 1930. Two operators, the Northern Light Packing Company, located on Mountain Slough and the New England Fish Company, located in Drier Bay, did not operate traps. There was one independent trap operated by Mr. B. E. Lee who sold the total catch to the Port Ashton plant of the Shepard Point Packing Company. The operators and the number of traps operated by each follow:

<u>Company</u>	<u>Location of Plant</u>	<u>Traps Operated</u>
Alaska Pacific Salmon Corporation	Drier Bay	4
Copper River Packing Company	Port Nellie Juan	8
Cordova Packing Company	Cordova	1
Glacier Packing Company	Cordova	1
New England Fish Company	Cordova	8
Northwestern Fisheries Company	Orca	6
Pacific American Fisheries	Valdez	4
Pioneer Packing Company	Cordova	4
Pioneer Sea Foods Company	Eyak River	2
Premier Salmon Company	Stevens Creek	3
San Juan Fishing & Packing Company	Port San Juan	5
Shepard Point Packing Company	Port Ashton	8
Shepard Point Packing Company	Shepard Point	4
B. E. Lee	Port Nowell	1



## SALMON PACK

The pack of the Prince William Sound area this season was a good average, exceeding the packs of three years and being smaller than the packs of three years of the past seven.

The pack of the Copper river area was good, being the second best secured over a period of many years with relation to Reds and the largest for Cohos.

During the 1930 season the number of canneries operating was the same as in the season of 1929. Canneries operating, their location and pack secured, follow:

<u>Company</u>	<u>Location of Plant</u>	<u>Total Pack</u>
Alaska Pacific Salmon Corporation	Drier Bay	30,629
Copper River Packing Company	Port Nellie Juan	90,037
Cordova Packing Company	Cordova	33,332
Glacier Packing Company	Cordova	32,877
New England Fish Company	Cordova	55,887
New England Fish Company	Drier Bay	13,324
Northern Light Packing Company	Mountain Slough	24,790
Northwestern Fisheries Company	Orca	41,449
Pacific American Fisheries	Valdez	45,303
Pioneer Packing Company	Cordova	64,681
Pioneer Sea Foods Company	Eyak River	48,776
Premier Salmon Company	Stevens Creek	29,617
San Juan Fishing & Packing Company	Port San Juan	56,591
Seward Fisheries Incorporated	Seward	15,419
Shepard Point Packing Company	Port Ashton	30,039
Shepard Point Packing Company	Shepard Point	78,695

## CONSERVATION

The timing of the salmon runs in Port Wells waters, being earlier than in other portions of Prince William Sound, a closure of this area to fishing operations at an earlier date seems advisable.

Escapement would be speeded up and increased spawning promoted by closing the Upper Culross Island trap as well as all the waters of the Port Wells region about July 25th.

The extension of the prohibitive areas beyond the 500-yard limit, as prescribed at present in certain regulations, seems to be of very little value from a conservation standpoint.

A DILIGENT AND SPEEDY PATROL OF ALL STREAMS IS ABSOLUTELY ESSENTIAL AND WILL PROTECT CLOSED WATERS WHEN PROPERLY ADMINISTERED. Along with the foregoing statement it should be said that an efficient speed boat and airplane patrol will do more to conserve the runs and continue their present volume than any other means that can be adopted.

In making an investigation of spawning escapement it was observed that by far the greater volume of escapement was achieved by the runs after the active fishing season had closed. This was caused by the enormous amount of gear working heavily and throwing the runs out of their orbital motion during the major portion of the season.

It was also noted that the runs were just beginning to enter protected areas of salmon streams during the last days of July just prior to the close of the season.

#### VIOLATIONS

With the commencement of the fishing season operators were advised that all provisions of the regulations were to be observed. As violations continued to occur with the progress of the season larger fines were assessed. Wide publicity was secured through the operating companies in cases involving violations of the Fishery Regulations and the fishermen were acquainted with the policy of assessing larger fines so long as illegal fishing continued. By following this procedure violations decreased and it was worthy of note that during the coho season illegal fishing was reduced to the minimum. There were twenty-one violations of the regulations in the Central Alaska District.

One case involved the taking of clams under the legal limit regulating size. The defendant on plea of guilty and payment of twenty-five dollars fine was released.

Twelve arrests were made for various forms of illegal gill net operations on the Copper river flats, and on plea of guilty and payments of fines of from fifty to two hundred dollars the offenders were released.

Six arrests were made for various forms of illegal seining operations on Prince William Sound, and upon plea of guilty and payment of fines ranging from \$150 to \$300 the offenders were released.

One arrest for illegal seining on Prince William Sound to secure fox feed, following the close of the season, was made, and on plea of guilty and the payment of \$100 fine the offender was released.

One operating company was arrested for packing fish over forty-eight hours old, the same not having been iced or frozen. On plea of guilty the company was fined \$500.

## BUREAU ACTIVITIES

Bureau of Fisheries activities commenced with the departure of the writer and stream guard, Morris Rafn, from Seattle on the steamer "Northwestern" April 12th. The "Northwestern" arrived in Cordova on the morning of April 18th.

The gas boat "Pilot" was immediately chartered and put into service April 21st, to patrol the clam bars and receiving stations on the Copper River flats.

The chartered boat "Prospector" commenced duty May 19th and immediately took up the work of erecting stream markers on the Copper River flats and patrolling that area.

The chartered boat "Stanley" was sent out on June 21st to station stream guards in various localities on Prince William Sound, and to patrol those waters.

The U. S. F. S. "Kittiwake" left Seattle May 21st and arrived in Cordova on June 3rd. She was immediately detailed to work in erecting stream markers on Prince William Sound.

The number of stream guards used during the season fluctuated, the least number employed being three and the largest complement nine. These men were all residents of Alaska and supplied small power boats when operating for the Bureau.

In addition to the foregoing three stream guards were taken to the Central Alaska District from Seattle. These men were stationed on the chartered patrol boats throughout the summer.

Through the active fishing season a continuous patrol of all the fishing areas of the Central Alaska District was maintained by the U. S. F. S. "Kittiwake", and the chartered boats, "Prospector", "Pilot", and "Stanley".

All bays closed to fishing were diligently patrolled and the traps of the region were regularly inspected during weekly closed periods.

All stream markers were checked and those damaged or destroyed were replaced with new markers having the recommended change in the date and name of the Secretary of Commerce entered thereon.

Surveys of all accessible spawning areas were made at frequent intervals during the active fishing season by stream guards stationed on the various patrol boats, and a complete survey of all streams was taken at the close of fishing operations, a detailed report of which follows:

CHART NO. 8515FINAL ESTIMATE (EAST SIDE)1930

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Zaikof Bay	1	September 8	8,000	20
Zaikof Bay	1A	September 7	300	--
Zaikof Bay	2	September 8	1,700	--
Ziakof Bay	3	September 8	8,500	80
Rocky Bay	4	September 7	19,000	--
Port Chalmers	5	September 4	8,500	--
Port Chalmers	5A	September 5	7,000	--
Port Chalmers	6	September 6	4,500	--
Port Chalmers	7	September 6	8,000	--
Port Chalmers	8	September 6	6,500	--
Port Chalmers	9	September 5	46,000	90
Montague Island	10	September 5	3,500	--
Montague Island	10A	September 5	4,000	60
Montague Island	10B	September 5	1,500	50
			<u>127,000</u>	

NOTE: Of the above total 74,050 were pink salmon and 52,950 chums.

CHART NO. 8515FINAL ESTIMATE (WEST SIDE)1930

Hanning Bay	11	September 2	12,000	50
MacLeod Harbor	12	September 2	13,500	30
Montgomery Bay	13	August 26	2,500	--
Big Bay	14	August 26	7,000	--
Wilson Bay	15	September 3	2,250	--
Crab Bay	16	August 26	19,600	5
Latouche Passage	17	August 25	5,000	--
Shelter Bay	18	August 25	1,600	--
Shelter Bay	19	August 25	1,800	--
Hogan Bay	20	September 2	5,500	--
Snug Harbor	21	September 1	4,000	--
Snug Harbor	21A	September 1	1,150	--
Marsha Bay	22	September 2	400	--
Marsha Bay	23	September 2	1,100	--
Drier Bay	24	August 30	15,000	--
Drier Bay	25	August 30	1,300	--
Drier Bay	26	August 30	3,500	--
Drier Bay	27	August 30	5,000	65
Thumb Bay	28	Allowance	2,000	--
Important small streams			<u>7,050</u>	
			<u>102,250</u>	

NOTE: Of the above total 88,420 were pink salmon and 13,830 chums.

CHART NO. 8517FINAL ESTIMATE1930

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Knight Island	1	September 1	1,600	--
Knight Island	1A	August 31	4,200	--
Knight Island	2	August 31	4,200	--
Ewan Bay	3	August 21	2,000	--
Ewan Bay Lagoon	4	August 22	15,000	--
Paddy Bay	5	August 21	1,300	--
Paddy Bay	6	August 21	3,300	5
Eshamy Lagoon	7	August 20	7,500	--
Gumboot Creek	8	August 20	500	--
Main Bay	8A	August 20	500	20
McClure Bay	9	August 19	1,000	10
McClure Bay	10	August 19	6,500	85
McClure Bay	10A	August 19	1,000	90
Blue Fiord	11	August 19	1,300	25
Port Nellie Juan	12	August 18	450	--
Port Nellie Juan	12A	September 17	11,500	30
Port Nellie Juan	13	September 17	12,500	5
Port Nellie Juan	14	September 19	13,400	10
Port Nellie Juan	15	September 17	39,000	4
Port Nellie Juan	15A	August 18	2,100	--
Culross Passage	16	September 18	13,000	5
Culross Passage	17	August 17	17,000	1
Culross Passage	17A	August 17	700	10
Cochrane Bay	18	August 17	4,000	5
Cochrane Bay	19	August 16	600	10
Cochrane Bay	20	August 16	1,100	--
Cochrane Bay	21	August 16	700	30
Cochrane Bay	22	August 15	3,000	10
Cochrane Bay	23	August 15	5,000	10
Blackstone Bay	23A	August 15	3,700	7
Important small streams			<u>2,550</u>	
			180,200	

NOTE: Of the above total 163,691 were pink salmon and 16,509 chums.



CHART NO. 8520FINAL ESTIMATE1930

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Hartney Bay	1	Allowance	2,000	--
Cordova Bay	2		Nothing	
Fleming Spit	3	Allowance	200	--
Humpback	4	Allowance	5,000	--
Cordova, Bay	5	Allowance	500	--
Cordova Bay	6	Allowance	500	--
Cordova Bay	6A	Allowance	250	--
Cordova Bay	6B	Allowance	250	--
Simpson Bay	7	August 29	500	--
Simpson Bay	8	August 29	8,000	40
Simpson Bay	9	August 29	200	2
Simpson Bay	10	August 29	150	--
Sheep Bay	11	October 3	37,000	25
Sheep Bay	12	October 3	12,000	30
Sheep Bay	13	August 30	450	--
Hawkins Island	14	Allowance	300	--
Windy Bay	15	August 19	1,500	--
Makaka Point	16	August 19	6,000	--
Hawkins Island	16A	September 19	15,000	--
Canoe Passage	16B	Allowance	5,000	--
Boswell Bay	17	Allowance	7,000	--
Hawkins Cutoff	18	Allowance	1,500	50
Hawkins Cutoff	19	Allowance	3,000	50
Hawkins Cutoff	20	Allowance	3,000	50
Hawkins Cutoff	21	Allowance	1,500	--
Anderson Bay	22	August 19	3,500	75
Anderson Bay	23	August 19	1,000	10
Anderson Bay	24	September 12	7,500	--
Anderson Bay	25	September 12	1,500	--
Johnstone Point	26	Allowance	100	--
Shelter Bay	27	September 11	6,000	10
Hinchenbrook Island	28	September 11	12,000	65
Hinchenbrook Island	29	September 11	10,000	10
Port Etches	30	September 9	5,000	60
Port Etches	31	September 10	20,000	40
Port Etches	32	September 10	11,000	75
Port Etches	33	September 10	21,000	70
Port Etches	34	September 10	32,000	25
Port Etches	35	September 9	76,000	70

317,400

NOTE: Of the above total 190,321 were pink salmon and 127,079 chums.

CHART NO. 8519FINAL ESTIMATE1930

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Gravina Bay	1	August 31	950	--
Gravina Bay	2	August 31	20	--
Gravina Bay	3	August 31	900	--
Gravina Bay	4	August 31	440	--
Gravina Bay	5	August 31	3,500	--
Gravina Bay	6	September 1	400	--
Gravina Bay	7	October 3	63,000	4
Gravina Bay	8	September 1	1,200	--
Gravina Bay	9	September 1	180	--
Olsen Bay	10	October 2	20,400	2
Olsen Bay	11	August 23	4,500	1
Gravina Bay	12	September 2	750	2
St. Matthew Bay	13	September 2	11,000	1
Two-Moon Bay	14	September 3	550	--
Irish Cove	15	September 4	600	--
Whalen Bay	16	September 4	11,000	2
Fidalgo Bay	17	September 4	1,800	10
Fidalgo Bay	17A	October 1	51,000	90
Fidalgo Bay	18	October 1	130,000	98
Fidalgo Bay	19	September 5	600	--
Fish Bay	20	September 29	50,000	6
Fish Bay	21	September 5	1,700	--
Fish Bay	22	September 5	300	--
Fish Bay	23	September 5	1,600	--
Landlocked Bay	24	September 5	50	--
Landlocked Bay	25	September 6	7,500	70
Boulder Bay	26	September 6	1,500	--
Gladhaugh Creek	27	September 6	1,050	--
Galena Bay	28	September 7	6,000	--
Galena Bay	29	September 7	2,500	--
Galena Bay	30	September 29	67,000	3
Galena Bay	31	September 28	16,000	--
Valdez Arm	32	September 8	4,500	--
Jack Bay	33	September 8	4,800	20
Jack Bay	34	September 8	5,600	2
Jack Bay	35	September 28	21,000	--
Jack Bay	36	September 28	32,000	50
Valdez Arm	37	Allowance	5,000	--
Valdez Arm	38		Nothing	
Sawmill Bay	39	September 27	35,000	60

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Sawmill Bay	40	September 27	9,400	10
Sawmill Bay	41	September 9	350	--
Columbia Bay	42		Nothing	
Long Bay	43	September 26	1,800	--
Long Bay	44	September 26	41,000	20
Long Bay	45	September 26	120,000	2
Long Bay	46	Allowance	<u>300</u>	--
			738,740	

NOTE: Of the above total 502,070 were pink salmon and 236,670 chums.



CHART NO. 8550FINAL ESTIMATE1930

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Near Glacier Island	1	Allowance	200	--
Near Glacier Island	2	September 25	6,200	--
Near Glacier Island	3	Allowance	1,000	--
Cedar Bay	4	September 25	113,000	--
Wells Bay	5	September 24	8,000	--
Wells Bay	6	September 24	42,000	12
Unakwik Inlet	7	September 22	16,700	--
Unakwik Inlet	8	August 9	9,600	--
Unakwik Inlet	9	September 22	Nothing	--
Unakwik Inlet	10	August 11	5,600	--
Unakwik Inlet	11	September 23	46,000	15
Unakwik Inlet	11A	September 23	26,500	--
Eaglik Bay	12	September 21	18,000	5
Eaglik Bay	13	September 21	40,000	8
Eaglik Bay	14	September 21	9,000	20
Eaglik Bay	15	September 21	63,000	--
Eaglik Bay	16	September 21	4,500	40
Esther Passage	17	August 12	300	--
Esther Passage	18	August 12	4,000	--
Esther Passage	18A	August 13	1,200	--
Esther Passage	18B	August 13	1,000	--
Golden	18C	August 13	4,000	--
College Fiord	19		Nothing	
Coghill River	20	Allowance	10,000	20
Harrison Lagoon	21	August 13	11,000	20
Hobo Bay	22	August 13	10	--
Bettles Bay	23	August 13	8,000	15
Hummer Bay	24	August 14	2,000	--
Pirate Cove	24A	August 14	275	--
Pigot Bay	25	August 14	11,000	--
Entry Cove	25A	August 14	600	--
Logging Camp Bay	25B	August 14	4,600	--
Chenega Island	26	Allowance	1,000	--
Chenega Island	26A	August 30	10,000	--
Chenega Island	27	Allowance	300	--
Chenega Island	28	August 22	5,000	--
Chenega Island	29	August 22	2,500	10
Chenega Island	30	August 23	2,000	--
Chenega Island	30A	August 29	800	--

<u>STREAM LOCATION</u>	<u>STREAM NUMBER</u>	<u>DATE ESTIMATED</u>	<u>NUMBER FISH</u>	<u>PERCENT CHUMS</u>
Jackpot Bay	31	August 22	3,800	20
Jackpot Bay	32	August 23	35,000	--
Jackpot Bay	33	August 23	4,600	--
Jackpot Bay	34	August 22	14,000	25
Whale Bay	35	August 29	1,200	--
Whale Bay	36	August 29	7,300	20
Whale Bay	37	August 29	600	--
Whale Bay	38	August 29	3,000	10
Point Countess	39	August 29	1,800	--
Bainbridge Passage	40	August 29	3,500	--
Bainbridge Passage	41	August 28	10,500	--
Bainbridge Passage	42	August 28	3,000	--
Bainbridge Passage	43	August 28	400	--
Bainbridge Head	44	August 28	6,500	--
Hogg Bay	44A	August 27	3,000	5
Hogg Bay	44B	August 28	30	--
Important small streams			<u>19,400</u>	--
			606,515	

NOTE: Of the above total 575,055 were pink salmon and 31,460 chums.

PRINCE WILLIAM SOUNDEAST SIDE (Includes all streams east of 147° 20' west longitude)

Total fish in numbered streams:

<u>Chart No.</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
8515	74,050	52,950	127,000
8519	502,070	236,670	738,740
8520	<u>190,321</u>	<u>127,079</u>	<u>317,400</u>
	766,441	416,699	1,183,140

WEST SIDE (Includes all streams west of 147° 20' west longitude)

Total fish in numbered stream:

<u>Chart No.</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
8515	88,420	13,830	102,250
8517	163,691	16,509	180,200
8550	<u>575,055</u>	<u>31,460</u>	<u>606,515</u>
	827,166	61,799	888,965

Total, Prince William Sound Area.....2,072,105  
 20% Allowance for small streams not visited..... 414,421

TOTAL ESCAPEMENT, PRINCE WILLIAM SOUND AREA..... 2,486,526

NOTE:

The foregoing estimations were tabulated from the log of Captain George E. Scott of the chartered boat Prospector and represent the final estimates for the streams of the Prince William Sound area. Estimates made by other members of the Bureau of Fisheries are not included in the escapement tabulation except in a few instances where Captain Scott was unable to visit the streams.

In covering the district for the final escapement records, Captain Scott was supplied with estimates made by other members of the Bureau in various localities. These estimates were found to compare favorably with the estimates made by Captain Scott except where the lapse of time enabled a later run of fish to be tabulated. The use of these estimates by Captain Scott, some of which were made within a week or two of his final visit, enabled him to complete this year's escapement survey of Prince William Sound earlier and more thoroughly than in the past.



## SALMON ENEMIES

Activities against salmon enemies in the Central Alaska District consisted of operations against trout and seal.

Stream guards and other members of the Bureau of Fisheries personnel in the Central Alaska District were instructed to shoot seal and predatory birds under conditions commensurate with the efficient handling of their other duties.

Bureau cooperation was extended to Messrs. Halferty, Einmo and Malloy in the seining and destruction of trout in various localities throughout the District. These three trout operators captured and marketed over twenty-five thousand trout up to the first of October and plan to continue their operations as long as trout can be secured in commercial numbers.

During the fore-part of the Copper river run of reds when seals are very numerous and quite active among the Sand Islands of the Upper Delta, Alex Lamont, later employed as a stream guard, was induced to visit this locality and hunt down seals. He reported making expenses while so engaged, but stated that he recovered only about one seal for every three killed.

Hair seals do tremendous harm to salmon runs in this Delta region, and in observing and thinking the matter over carefully it appears that something definite should be done to stop their depredations. The wilderness locality where these natural enemies of the salmon operate gives an opportunity for a novel and highly efficient handling of their extermination. The method employed, to my mind, should involve the use of an airplane and some form of poison gas. On any calm day the airplane could swoop low over the Delta area and drop bombs containing a heavy gas which would roll low over the water and instantly kill every hair seal that rose to the surface. These operations would have to be carried out before any fishermen were on the grounds, - sometime early in the month of May.

## HERRING

Herring activities were confined to reduction plants, four of which were operated during the past season. The names of the companies and the location of their plants follow:

<u>Company</u>	<u>Location of Plant</u>
Chatham Strait Fish Company	Crab Bay
San Juan Fishing & Packing Company	Port San Juan
Johnson Fisheries Company	Thumb Bay
Port Benny Packing Company	Port Benny

In addition to the foregoing companies the motor ship "Donna Lane", of the Utopian Fisheries, Incorporated, anchored in Saw Mill Bay late in September, and engaged in packing Scotch cured herring. This plant sold its herring offal and herring unsuitable for curing purposes to the Port Benny reduction plant.

The reduction plants, named above, packed a few barrels of Scotch cured herring in conjunction with reduction plant activities.

One new company in the process of organization took over the old Tiederman property in Simpson Bay and plans to cure herring and install reduction machinery there for the coming season.

The Chatham Strait Fish Company, the largest operator in the district, up to the close of September had produced 350,000 gallons of herring oil, 1,200 tons of herring meal and approximately 2,000 barrels of Scotch cured herring.

The Port Benny Packing Company, headed by W. J. Imlach, acquired the Morgan Packing Company plant by sheriff's sale and began operating it in September. By the close of that month the plant had produced 5,000 gallons of herring oil, two tons of meal, and slightly over 100 barrels of Scotch cured herring.

Herring were more plentiful in the waters of Prince William Sound this season than for many years past. However, they were of small size and not very choice for curing purposes. Late in September the percentage of curable herring increased, and operators cured more of the large fat herring.

#### CLAMS

A clam patrol was commenced on April 21st, utilizing the chartered boat "Pilot". The various canneries, weighing stations and clam bars were visited frequently from the commencement of the patrol until the close of the season July 15th. With the opening of the season September 1st, operations were again kept under surveillance.

Three canneries operated in the vicinity of Cordova this year, two of which were hand plants. About seventy diggers were employed by these three canneries. S. E. Smith's Cannery employed from three to five diggers; E. A. Halthess Cannery from eight to ten and the Pioneer Packing Company from fifty to sixty.

The Pioneer Packing Company plant established two receiving stations, one located at Cape Whitshed which had an average of thirty-five diggers and the other in Boswell Bay with an average of twenty diggers. The Boswell Bay station was moved to Egg Island in June when weather conditions on the flats were favorable.

The age count of clams this year ran as an average six years. At the commencement of the clam patrol, early in the season, diggers and operators of the district were warned not to take clams under the regulation limit of four and one-half inches. Weather and tidal conditions for the most part during the early part of the season, undoubtedly, accounted for the small dig. The average size of clams throughout April and up to the middle of May was five and one-quarter inches. Up to this time the tides were none too favorable for diggers and the weather was cold. From the middle of May to the middle of July, when the season closed, the average was five and three-quarter inches.

With the opening of the season in September operations were resumed on a more limited scale, but by mid-month all digging ceased. The Pioneer and Halthess plants planned no further operations for the remainder of the year. The Smith Cannery will operate intermittently when weather and tidal conditions are favorable.

Point Steele beach, on Hinchinbrook Island, was visited once during the season by the boat on clam patrol. This beach has an abundance of clams and has been, as yet, dug very little. The exposed condition and inaccessibility of this beach to diggers accounts for this.

#### CRABS

One crab meat packing plant operated in the district this season. This was the plant of the Northern Sea Food Company located at Cordova. It put up a very small pack due to a poor market for the product.

Cockerel and Horse clams were used for baiting the crab pots in making catches.

#### SHRIMP

Considerable prospecting for shrimp was carried on in the vicinity of Cordova the past season. Operations were conducted by Mr. Thomas Scott, of the Cordova Packing Company, and Mr. Charles Olson, of the American Can Company.

Shrimp in commercial quantities were located in the vicinity of Cordova and appeared very similiar to the Petersburg product. Various processes for canning these shrimp were tested in Cordova but no definite action has yet been undertaken on a commercial scale.

#### VISITORS

Mr. Henry O'Malley, Commissioner of Fisheries of the United States, and party visited the District during the season. Traveling aboard the flag ship "Brant", they arrived in Prince William Sound waters early the morning of July 25th.

The party remained in Sound waters two days, visiting Port San Juan, Port Ashton, Nellie Juan, Valdez, and Cordova, leaving on the evening of July 26th for Southeastern Alaska points.

## RECOMMENDED CHANGES IN REGULATIONS

### Resurrection Bay Area

- Paragraph 7. It is recommended that Paragraph 7 be made to read:  
"Commercial fishing for salmon is prohibited during the remainder of each calendar year after 6 o'clock postmeridian September 20."

### Prince William Sound Area

- Paragraph 2. It is recommended that Paragraph 2 be made to read:  
"No salmon fishing boat shall carry or operate more than one seine of any description, and no additional net of any kind shall be carried on such boat. The carrying of any additional seine or net of any kind on a boat towed by any salmon fishing boat is prohibited. No purse seine shall be less than 150 meshes in depth nor less than 125 fathoms nor more than 150 fathoms in length measured on the cork line. For the purpose of determining depths of seines, measurements will be upon the basis of  $3\frac{1}{2}$  inches stretched measure between knots. No extension to any seine in the way of leads will be permitted."
- Paragraph 6. It is recommended that Paragraph 6 of the Prince William Sound area be withdrawn.
- Paragraph 7. It is recommended that Paragraph 7 be changed to read:  
"Commercial fishing for salmon, except by trolling, is prohibited prior to 6 o'clock antemeridian June 20 in each calendar year."
- Paragraph 10. It is recommended that Paragraph 10 be abolished.
- Paragraph 12. It is recommended that Paragraph 12 (c), (d), (e), (f), (g), (h), (j), (k), (l), (m), (o), (u) and (y) be abolished.  
It is recommended that (p) be changed to read:  
"Unakwik Inlet, indenting mainland on north shore of Prince William Sound: All waters north of an east and west line passing through the northern side of the entrance to Jonah Bay."